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THE KANSAS FARMER.

HUDSON & EWING, Editors and Proprietors
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Wind-Mills.

EDITORS FARMER: In my last, I said that I would in my next give your readers a description of matters of interest to them that I found my "bell-wether" patron, Mr. Charles W. Sylvester, of Marengo, Ill., had introduced since I last visited him.

I originally ventilated for him an apartment in the cellar of his dwelling, for a dairy, and supplied it with air through a subterranean air-duct, and exhausted the air direct from the dairy, and lost all further benefits from it after it had been tempered and purified, by transmitting it through a conduit laid in a stratum of earth below the influence of the extremes in the external temperature.

I found that he was now ventilating his house with the same air, and that he was setting his milk in an upper room, which he said he found actually lessened the labor of manipulating the milk and butter fully half. He added:

"I want a milk-house above ground."

I replied: "Then I am just in time, for I have just completed plans for an above-ground milk-house, and have the plans in my carriage. I brought them with me to submit them to you before I sent them to the heliotype, that I might avail of your criticism of them."

I fully explained the plans to him, and he is very intelligent in architectural plans, and asked him to give me his views of them without reserve. He did so, and only made one suggestion, which I adopted. It was to use two doors to the same opening in an inside partition where I had but one.

Said he: "I have found that there is no use of trying to control the temperature of a building or a room, unless you thoroughly insulate from below the lowest floor, to the ridge of the roof. I have been experimenting in ventilating and altering the construction of my buildings ever since I met you, and that is one of many things that I have learned. I would not think of building a dwelling in any climate without making double outside doors and double windows, or without sub-earth ventilation; and I would ventilate and temper the cellar and garret as well as all other apartments. For my fruit and vegetables I would make a special arrangement, which I will describe, and I would like to have your opinion of my plan, and I know you will, as you always do, give me the benefit of your long experience."

"I should make close bins for my roots and fruit, that is close, except openings for the ingress of air. This is very cheaply done now, by putting paper board on the bins."

"I would take a branch pipe from the supply-duct and discharge the air from it under my bins, the floors of which I would make of slats; then I would take an independent exhaust-pipe and connect it with the exhaust-flue. Of course I would have a valve in the supply-pipe to the bins, so that I could avail of all the air delivered by the duct for other parts of the building when no ventilation was required in the bins."

He added: "As you know, when I applied to you to ventilate for me, it was to cool and temper my dairy-room only. I never thought of any further use of the duct-air, and really I prize it as much for warming my house in winter as for cooling it in summer. I assure you there would be great economy in heating a properly built house if it is well supplied with sub-earth air, at about 50°, instead of being obliged to take it in at zero and below, as we have to every winter."

He added: "My neighbor, Mr. Wilson, banked his cellar last winter, but I suppose he did not do it thorough enough, and he lost eighty bushels of potatoes by freezing. I have always banked mine before, but I was satisfied, and experience has proved that I was right, that if I let the duct-air circulate throughout, that my cellar would not freeze without banking, and I am happy to say that it not only did not freeze, but it was never below 40°, and it tempered the whole house and gave us plenty of fresh, pure air, what we have never had before in winter."

He concluded with: "As I told Mr. James, of Wisconsin, whom you sent here, I would not think of building a dwelling without supplying it with sub-earth ventilation, if I did not keep a cow; the pure, tempered air is a great deal more important for the use of the family than for keeping milk or anything else."

"I have a great many come to see my ventilation, and all admit that it is the best they ever

saw, and so it is, but I can improve it, and I am going to."

Now, Messrs. Editors, it would be very strange if the details of the appliances for using sub-earth ventilation were not rapidly brought up to a very high standard when it is in the hands of such men as Mr. Sylvester. Those who have adopted sub-earth ventilation are mainly the most progressive and intelligent men in the country.

Mr. S. then took me out to show me his stock, his Holsteins and his Normans—both are mostly grades, but as good as I ever saw. He had, when I had visited him before, a fine herd of swine. I asked to see them. He replied, "I can show what few I have left. I lost five hundred dollars' worth of my best hogs last summer with the cholera, so-called." He said that he "had seen no signs of it lately with what few he had left."

He then showed me his new wind-power, that he had had in operation but a few weeks. He showed me the mill in operation while grinding corn and oats for feed. There was but a gentle breeze yet the mill ground at the rate of four bushels per hour and ground well. He told me that with a fair breeze the mill would grind table meal fifty to eighty bushels per diem. I examined the table meal ground by this mill, and I never saw better.

The mill was specially adapted to the wind-power, the feed being automatically regulated according to the velocity of the wind. The wind-wheel stands about 150 feet from the churn-room, and the power is transmitted by an endless rope with a tightened pulley near the churn. I expressed surprise that he did not use a suitable wire-rope. He replied that he investigated that branch of the subject as well as others, and found that a manilla rope, thoroughly saturated with a paint of raw linseed oil, with which a small quantity of very finely pulverized charcoal was incorporated, making a thin paint, was durable when exposed to the weather, and that it was greatly preferable to either wire or tarred hemp rope, as a belt.

Mr. S. has a one-horse lever-power, an excellent one, costing only \$20, in a shed near the churn-room, which he uses to churn with, in case there is a "dead calm," and the wind-wheel will not run; but he informed me that his wheel, which is twenty feet in diameter, with the merest zephyr, would carry the churn.

The counter-shaft, near the churn, is arranged with a cone of rope-pulleys, and a very simple arrangement for shifting the rope for high or low speed, without stopping, and so arranged that the churn may be given any desired speed, and may also be stopped or started instantly, by simply raising or lowering the tightener pulley.

I have never seen such perfection in the devices for applying to a great variety of purposes a fluctuating power. I examined all with care, for I had formed a very unfavorable opinion of wind-power for such purposes as I have described, though I prize it very highly for pumping water into a reservoir, where the water may be stored for use in a calm. I had written down wind-power, except for the purpose named, and repeatedly published condemnatory articles on it, but I am constrained to say that wind-power, such as Mr. S. uses, is really an excellent power for stationary farm machinery.

I must mention that Mr. S. has been using an eight-horse lever power, over which he had constructed a good house, but he told me that he would sell the horse-power, as he found the wind-power all that he desired, and vastly preferable to the horse-power. The wind-power, with the burr-stone mill, a good one, all put in running order, costs but about \$400. I think that it will be very durable. An effective feed-mill without a miller, it must be acknowledged a prodigious stride in automatic machinery.

I have practiced my profession as an architect and ventilating engineer in fourteen states of the Union, and nowhere have I found such a rarity and such perfection in all kinds of labor-saving farm machinery as I find in the northwest. The appliances extend to every branch of farm labor, except milking. I have tested four different machines for that purpose, but have not as yet found any that is satisfactory.

I had purposed enumerating the advantages and disadvantages of wind-power for running stationary machinery on the farm, as compared with steam and animal power, but I must make it the subject of another paper, as this has already the usual length of my contributions to the press.

J. WILKINSON.

Harvard, Illinois.

Transferring Bees.

Joseph M. Brooks of Columbus Indiana, through the *Indiana Farmer* gives his mode of

transferring bees from a common box hive to a moveable frame hive.

No doubt but there are many of your readers who, having their bees in box hives, would willingly transfer them to moveable-comb hives if they knew how to proceed. After deciding on the hive you will use, the next thing will be to make four sticks, like kite sticks, for every frame your hive contains, and about half an inch longer than your frames are deep, on each end of half the sticks, twist pieces of broom-wire about three inches long. Next, get a board a little larger square than your frames, make two grooves across it at equal distances apart, and from each end and as deep as the sticks are thick. Next, you will need a hatchet, hand-saw, chisel and a long-bladed knife, a wash-bowl of water, a towel, and several pans in which to lay pieces of comb containing honey.

The best time to transfer bees is in May, when apples are in full bloom. Proceed with a roll of cotton rags to drive them up into a box placed on the hive, this box should have a large hole cut in its side, and covered with wire-cloth, so you can see when they are clustered in it. Blow a little smoke in the entrance and drum on the hive gently until the bees fill themselves with honey and cluster in the box above, when it should be set on the stand to catch the bees returning from the field, removing the old hive to an out-house, or the kitchen table. Set the hive on the table with its top down, see which way the combs run, saw off the cross-sticks, and with hatchet and chisel pry off one side of the hive. Lay your transferring board before you, place two of the sticks having wires into the grooves; cut out a sheet of comb, lay it on the board and lay your frame on it, cut on the inside of the frame and spring the frame over it, lay two sticks directly over those under the comb, wrap the wires securely around their ends. Raise up one side of the board, which will bring the frame with its comb in an upright position ready to be placed into the new hive, which should be placed on the table that any bees remaining on the combs can, with a feather, be brushed into it. Proceed in this way with all the combs, being careful to place the combs in the new hive just as they were in the old one, keeping the brood nest together. Reject all drone combs and those that are uneven or too thick. If the sheets are larger than your frames, cut them so as to take in all the brood, even if you exclude their honey, as it can be fed back to them by laying the combs in a shallow pan, pie-pans are best, and renewing the combs as fast as the bees carry the honey down, until white clover blossoms. Set the hive on the same stand, the box-hive occupied. Shake the bees down at the entrance, when they will soon go in, and in a few days will be as much at home as they were in their old hive. The sticks supporting the combs can be taken off in a week or so, or as fast as the bees unite them to the frames. Great care must be taken in your work not to get honey daubed about, especially on the new hive, as it might cause other bees to rob your hive before the bees have time to recover and get their combs cleaned up. Take time, work slowly, and make a good job of it from beginning to end. I know from experience that to a beginner it looks like a difficult job, but unless you have the gift and courage to attempt it, you will never make a successful bee-keeper, and had better turn your attention to something else.

The Catalpa.

Inquiries about this tree are often made. Our experience extends to the planting of a few seed which we gathered from a tree or grove of them growing by the road side, from which we had no difficulty whatever in raising young trees. We set out, as shade trees in the yard a few which grew rapidly, but the points of the branches were invariably winter killed. The tops in consequence grew gnarled and scrubby. They did not make graceful trees. The climate where they were planted had a mean temperature eight or ten degrees higher than the region of Topeka.

In a paper read before the National Agricultural Congress, at New Haven, Mr. E. E. Barney, of Ohio, gave his method of planting and management as follows: "Plant in rows three or four feet apart, cover lightly one inch unless the ground is liable to bake, in which case much less. If pressed for room, one and a half to two feet apart, placing the seed three inches apart in the row, as all may not germinate. When a few inches high, thin out to one foot in the row, transplanting those taken up. At one foot apart in the row they will make a better growth than nearer, and at that distance, if desired, they may be left in the seed bed two years. They are more easily transplanted at

the end of one year, though they may be left in seed bed two or even three years. When transplanted, place them four feet each way. Some prefer three feet by three feet. A year or two after transplanting, if any tree is not straight or puts out branches too low, it will make the taller and handsomer tree if cut down to the ground. When the trees are large enough to make fence stakes, hop and vineyard poles, cut out each alternate row one way. When large enough to make fence posts, cut out each alternate row the other way. In from twenty-five to thirty years, on good ground, the remaining trees should be large enough to make six railroad ties each."

There are two varieties of the Catalpa, but either is hardy, and both grow in similar soils and climates.

A Mortgage.

In the whole range of sacred and profane literature, perhaps there is nothing recorded which has such staying properties as a good healthy mortgage. A mortgage can be depended upon to stick closer than a brother. It has a mission to perform which never lets up. Day after day it is right there, nor does the slightest tendency to slumber impair its vigor in the night. Night and day, on the Sabbath, and at holiday times, without a moment's time for rest and recreation, the biting off-spring of its existence,—interest—goes on. The season may change, days run into weeks, weeks into months to be swallowed up into the gray man of advancing years, but the mortgage stands up in sleepless vigilance, with the interest, a perennial stream, ceaselessly running on. Like a huge nightmare eating out the sleep of some restless slumberer, the unpaid mortgage rears up its gaunt front in perpetual torment to the miserable wight who is held within its pitiless clutch. It holds the poor victims with the relentless grasp of a giant; not one hour of recreation; not a moment's evasion of its hideous presence. A genial savage of mollifying aspect while the interest is paid; a very devil of hopeless destruction when the payments fail.—E. C.

Sorghum Sugar.

In the prevailing desire manifested among farmers to produce their own sugar, agricultural sharks see a splendid opportunity to reap a rich harvest. This is particularly true in regard to making sugar from sorghum. The Minnesota amber cane is attracting considerable attention just now. From all the evidence we have gathered, we believe it is the best variety of sorghum for northern growth, as it matures early and produces a first-class quality of syrup or molasses, besides having a greater tendency to crystallize than any other yet tested. We have no evidence yet, however, that the farmer can produce sugar from it profitably, and we advise our readers who intend to plant it this season, not to expect too much of it.

What we began this article for, more particularly, was to warn our readers against purchasing "Recipes" or new apparatus for making sugar from sorghum, or purchasing seed of new and wonderful varieties of sorghum, "warranted to make a nice article of sugar." Two or three of these humbugs have already been brought to our notice, and as planting time approaches, the number will doubtless increase. If you will just remember that sorghum has a large proportion of grape sugar in it, and that the cane sugar present cannot be separated by ordinary means, it may save you some expense and greater disappointment. We have reason to believe that a Mr. Mapes, of Monroe Co., Tenn., who recently had an article in the *Ohio Farmer* on sorghum sugar, is one of these "sharks," and we advise our readers to give him a wide berth.—*Ohio Farmer*.

Crop Review.

FROM SPECIALS TO THE DAILY CAPITAL OF THURSDAY.

Washington, Washington Co.—We are having fine, growing showers of rain every few days; small grain of all kinds looks well, and is growing very fast; corn is about all planted; stock is now living on the grass of the prairie, and our farmers are happy. J. O. Y.

Phillipsburg, Phillips Co.—The crop prospect in Phillips county is A No. 1 at this time. Fine rains; plenty wet; wheat looking fine; corn just planted; old corn getting scarce, 50 cents per bushel; wheat for seed and bread, worth 70 cents per bushel; potatoes 50 cents. Never better prospects for good crops. J. H. L.

Winfield, Cowley Co.—Corn all planted, and most of it up. We have had an abundance of rain, in consequence of which all nature seems revived, and all crops are growing, as only Kansas can grow crops. There is everything to encourage the husbandman, at this date. M. G. T.

Kingman, Kingman Co.—Tuesday, April 22, we had a splendid rain, which has helped the

fall wheat considerably. There has been a large amount of corn planted this year. As this is rather a new county yet, we have no old crops on hand. Corn sells from 30 to 35 cents per bushel.

Fredonia, Wilson Co.—Growing wheat in good condition—cattle refusing to eat hay, and grass growing finely. The ground is in excellent condition; corn mostly planted. Fruit promises to be scarce; peaches nearly all killed; some cherries and small fruits. Old corn 20 cents per bushel, and scarce at that. G. M. F.

Erie, Neosho Co.—Walnut Grove township plants 2,402 acres of castor beans; fine rain last night; pasture good; wheat looking better, oats up; early potatoes need cultivation, and by the returns of one or two seasons I find more old corn on hand than last year. I report one-half of old crop on hand and will be sold after planting is over. C. F. S.

Elk Co.—Wheat is looking well since the rains; suffered some through the month of March from dry weather; oats are doing well, and a greater amount sown than any previous year in this locality; corn is nearly all planted, some up, acreage about 25 per cent. more than last year; farmers are feeling cheerful over the present prospects for good crops. G. T.

Parkerville, Morris Co.—Morris county has been favored with only a very moderate amount of rain, but enough to set all crops to growing. Oats did fair. Rather late for spring wheat. Winter wheat will be short in growth; we do not look for a full crop on average. The corn market is quiet, as the herds are all turned to the grass. R. S.

Holton, Jackson Co.—We are having fine, growing weather; wheat is doing well; not much spring wheat raised in this county; oats all sowed; farmers busy planting corn; will get done next week; perhaps one-fifth of the old crop of wheat and corn is still on hand; wheat is worth from 75 to 85 cents; flour \$2.50 to \$3 per sack; corn, 30 cents; oats, 20 cents. J. L. W.

Burlington, Coffey Co.—In twenty-two years residence in Kansas, I have never known a better spring for farmers, or work as hardward, nine-tenths of the corn is planted; ground thoroughly wet; wheat in splendid condition; great deal of corn up and being worked. Burlington improving fast; forty new houses going up; prospects never more flattering for town and country. K.

Council Grove, Morris Co.—Had a good rain on the 21st. Wheat looking well; about certain of a two-thirds crop; was injured by dry weather. But little spring wheat sown, but the largest acreage of fall wheat ever known. Corn mostly planted, and a very large acreage. Corn 30 to 40c since the rain and easier. People jubilant. Peach crop mostly killed, but large apple crop. Cherries and plums plenty. J. H. B.

Anthony, Harper Co.—Has been very dry all spring; commenced raining yesterday and still at it. Wheat is looking well and will doubtless be a good crop; corn, oats and potatoes up and looking fine. Spring has been dry, cold and backward, but with this rain coming at this time and so much of it, places the prospects of a bountiful crop beyond a doubt. No old crop on hand. Corn, 35 cents; potatoes, \$1; oats, 35 cents; high on account of county just settling. H. O. M.

Milford, Riley Co.—The last week shows a wonderful improvement in crop prospects; small grain is all more promising, though fall wheat can but make a light crop; the ground is in excellent order for planting, and farmers are rushing the corn into the ground; the stock of old corn on hand is light, the feeders having used it up very close in this section; of old wheat, there is but little more on hand than to bread the locality till harvest. A. B. W.

New Cambria, Saline Co.—We have been looking at the wheat in our section of country here, and find there will not be more than half a crop; we have some fields that look very fine, and then others that look like nothing. Spring wheat, oats and barley look very well since the late rains. There will be a large amount of corn planted this year, more than has ever been planted before. Peaches are all frozen; apples are looking well. G. & D.

Salem, Jewell Co.—The crops look well here, both spring and fall grain. There is a greater percentage of spring than fall wheat in this section of country. We had a splendid rain on the 22d. It rained yesterday; the crops were greatly benefited. There is no surplus of old grain on hand, except corn; price, per bushel, 25c. Potatoes, short; price per bushel, 35c. Hogs pretty well cleaned up at \$2.50 per one hundred pounds. H. S. B.

Osborn City, Osborn Co.—There are at present better prospects for winter wheat than we ever known in this county. There is very little old wheat on hand; prices range from 50 to 60 cents per bushel. We have thirty-five miles from the railroad. We have had copious rains, consequently we have reason to look for good crops. My reports will necessarily be short, for I have all that I can possibly do in my office business. C. G. P.

Marquette, McPherson Co.—Wheat in this county is looking very promising. The late rains saved much of it. Season has been dry but all is well now. Have had abundant rains for two weeks past. Perhaps 5 per cent. of last year's wheat crop remains, worth 75 to 85 cents. Some broom-corn still held for better prices. There will be more than an average of corn planted this spring. Old corn is abundant, and worth 25 cents. Oats up and promising; old crop mostly used up; worth 25 cents. Less fall crops than usual on account of dry weather. Very little spring wheat raised in this county. A. B.

Farm Stock.

The Fairholme Herd of Short-Horns.

Prof. E. M. Shelton of the State Agricultural College, says in the *Industrialist* of this celebrated Kansas herd, the property of Mr. J. C. Stone, Jr., of Leavenworth county:

"There is no one fact connected with the rapid growth of Kansas so remarkable as the very general diffusion among its farmers of pure-bred animals of all the different domesticated sorts. Heretofore the pioneer and settler has contented himself with scrub stock, and animals generally of low degree. We have looked back to the older States, New York, New England and Kentucky for blooded stock; and few of us have known that within our own doors, and scattered over all the state with a liberality unknown in New England, were fine herds of the choicest breeding. The unequalled attractions presented by Kansas to the breeder of pure-bred stock are well understood by breeders in the older States, many of whom are turning covetous eyes upon this stock-raiser's paradise. We venture nothing in saying that within the next two years Kansas will be pre-eminent in something besides wheat growing. She will be among the first of the States in the production of high-bred stock.

These thoughts were suggested by a recent examination of the herd of short horns named at the head of this article. Of this grand herd, ninety-three of the choicest animals will be sold at public auction, at the farm of J. C. Stone, Jr., near Leavenworth, May 27th; and, as we looked over this exceedingly promising lot, we were forcibly impressed with the importance to our stockmen of securing and retaining in Kansas this invaluable bovine colony.

We offer the brief description of this herd given below solely in the hope of being instrumental, to some extent, in securing the retention of this herd within the boundaries of our own state.

At the first glance at this herd, the visitor will be forcibly struck with its great uniformity. Almost the entire herd is made up of two and three-year-olds. There are no old worn-out cows which have quite outlived their usefulness and are now sold because of their doubtful fertility. Again, while none are in-bred in the offensive sense, yet all have been bred so steadily and persistently in the direction of the best Bates blood that a family resemblance runs through the herd. We do not remember to have ever before seen a herd, not strictly "line-bred," in which nicely-dished faces, clean muzzles, and unhealthier throats so generally prevailed. With one or two exceptions, the entire herd of ninety-three animals is made up of reds. Red is not our favorite color, but it is the popular one; and that it will remain so for a time there is little doubt. Certainly this will prove an attractive feature of the herd upon the day of sale. Finally, the herd is thoroughly acclimated. This is a point upon which we lay great stress. We have, in a large number of cases, seen valuable animals which were perfectly sound in the Eastern States, when brought to Kansas become sterile, often remaining so for months, and in some cases permanently.

In regard to the pedigrees of this herd, it is not necessary to say much. All are of the good, unquestioned sorts; albeit there is a wide range for fancy, as between the fashionably bred Craggs' and the plainer Seventeens. But whatever is said in this matter by the catalogue or auctioneer the owner will guarantee upon the day of sale, and afterwards. From our acquaintance with the owner of the Fairholme herd, and from the reputation of Col. Muir, the auctioneer, we have no hesitation in saying that the interests of buyer and seller will be equally guarded upon the day of sale. Young and inexperienced breeders may here bid with safety, and feel assured that the fantastic tricks so often resorted to at public sales will not be tolerated here.

In concluding this brief account of a valuable herd, we can do no better than to call attention to the very important fact that this herd has never been pampered, blanketed and "trained" for the sale of next month. Its treatment has been such as is well calculated to develop those sterling qualities—hardihood and good constitution, which this herd possesses in an eminent degree.

The Texas Drive.

The Texas cattle drive is expected to reach Fort Dodge, Kansas, about the middle of May and number 200,000 head. An experienced cattleman, Mr. Peyton Montgomery, recently returned from an inspection tour through Texas, and was interviewed by an agent of the Kansas City Indicator:

Cattle are very poor, and there have been heavy losses in certain portions. Take the cattle as a body and they are poorer than they have been heretofore. There is a lack of substance in the grass and a scarcity of water in the pastures.

After the drive reaches Dodge, Mr. Montgomery thinks the bulk of them will take the eastern trail by way of Fort Worth. A few will take the western trail. Most of the cattle are young steers—one and two-year-olds. There are very few females in comparison with former years, and very few heaves. The females are kept at home to raise young steers from. I do not think that more than 12,000 heaves—that is four-year-olds and upwards—will be driven. There is a good demand now for heaves for shipment to Havana and New Orleans, and the number which is used yearly for this purpose will amount to 50,000.

"How will prices run this year?"

"The impression is that prices will run very much this year as they did last."

"Will there be many cattle for the open market this year?"

"The probabilities are that there will be about 90,000 head for the open market. About one-fifth of the drive will go to Nebraska, and a portion to Colorado."

Horticulture.

The Fruit Garden.

The following suggestions for the care of small fruit from the *American Agriculturist* will be found useful guides for beginners in this branch of horticulture:

RASPBERRIES AND BLACKBERRIES.—When new shoots start from the ground, allow only those to grow that are needed for next year's fruiting. Novices need to be reminded that next year's fruit will be borne on stems that have grown this year, and that those which bear fruit this year will die.

CURRENTS.—Watch for the eggs of the destructive caterpillar; these are laid on the underside of the lowermost leaves, and if destroyed before they hatch, much future trouble may be prevented. When the worms appear upon the leaves, White Hellebore is an efficient remedy. It may be dusted upon the bushes dry, or by stirring a tablespoonful in a pail of water, and applying with a syringe or garden pump. Two or three applications, at the intervals of a few days, will dispose of them.

GOOSEBERRIES are attacked by the same insect, and the same treatment should be given them. In most localities, gooseberries are more profitable when marketed green than if ripe. They should be full-grown, but not be at all soft or colored.

THE WHITE GRUB, the larva of the "June or May or Dor-Bug," besides being very destructive elsewhere, often makes sad work with strawberries. Working under-ground, its presence is not known until the mischief is done. When a strawberry plant is found to wilt, take it up; its roots will be found to be eaten off, and it is past remedy. Search for the grub, and find it before it goes to another plant. They generally follow the row.

GRAPE VINES.—It is not too late to plant, if dormant vines can be had, and most dealers retard them by keeping a stock in a cool cellar. It costs but little to plant a few vines, and the reward will be abundant in a few years. Newly planted vines, whether set last fall or this spring, whether they were one or two years old when planted, should, for the future good of the vine, be allowed to bear but one single shoot this year. Probably, when planted, it had two, three, or more buds; all these will start. Rub out all but two, and when the shoots from these two are long enough to tie to a stake, remove one and tie up the other. Two are allowed at first to guard against accidents.

TRAINING OLD VINES.—Recollect that all the buds now on the vine (or nearly all) will form shoots, and whatever fruit is to be borne will be on the few (three or four) lower joints of these. If there are so many buds that the shoots from them will be crowded, rub them off. Allow no more shoots to grow than can have abundant room to spread their leaves without crowding.

LAYERING THE GRAPE.—If a cane of last year's growth is so situated that it can be brought to the ground and buried, layers can be easily made. Open a trench about six or eight inches deep, and peg such a cane along the bottom of it; when the buds start and make a few inches of growth, put a little earth in the trench, and as these shoots grow, pinch off their lower leaves, and gradually fill the trench. By next fall, each shoot will be well rooted, giving as many vines as there were shoots.

Eastern peach-growers will think Colorado a queer place, when they hear how that luscious fruit is grown in the mountain state. From the report of the state board of agriculture of Colorado, we make the following extract:

"Peach trees should be raised from the seed. Those raised from fruit grown in Colorado will be best. Ours will never be a peach-producing state until our peach trees are thus produced. This season I had many bushels of peaches—trees raised from Ohio seed. But it was an exceptional season. I utilized the results by planting a large lot of seeds from selected fruit. In this way we can get the peach acclimated and get a quality of fruit equal to that of Utah."

Horticulture on the Farm.

One principal reason why we have so few orchards, so few gardens of small fruits, such mere apologies for vegetable gardens, and scarcely an attempt at floriculture and ornamentation, all over the south and west, lies in a great measure in the fact that the average farmer is led to believe that there is some profound mystery in this branch of agriculture, requiring long years of experience and study. This, however, is no more the case than in the cultivation of the soil with reference to any crop.

The real farmer who succeeds in making a good home, and making money from his farm, must understand very decidedly and distinctly, the special culture and requirements of every crop cultivated, else he fails. Perhaps this may be why so many western farmers run so largely to corn and hogs, the first struggling among weeds, from lack of drainage and imperfect cultivation, and the latter dying of cholera, generated by imperfect care, and spreading the infection among other swine. They are analogous to that class of orchardists who plant largely in localities suited to the growth of fruit, and leave them harbors of weeds, and breeding places of insects, to the disgust and serious injury of their more intelligent neighbors who suffer from the yearly overflow of noxious insects from these natural breeding places. They thus yearly fill

our markets with wormy, indifferent and scabby fruit, scarcely fit for the cider mill and vinegar house. We hardly expect to see a better state of things until farmers generally come to understand the use of reading, to the end that they may get correct information upon what is new in their profession, just as other successful men in the various industries read journals especially devoted to their callings.—*Prairie Farmer.*

Cheap and Perpetual Asparagus.

Unnecessarily elaborate directions for making things after an expensive fashion often deter busy people from having them. This is especially true in the matter of asparagus. The fuss of the fanciful amateur discourages farmers, and therefore very many of them go without this delicious "early green." Our bed at Kirby Homestead is a dozen years old and cost for the roots \$1, and each year it helps to make spring more welcome by its abundant yield. The plants are set a foot apart in a spot of ground out of the way and dry and warm. It was made rich with manure, and every fall a load of horse manure is spread on the bed, and when a weed makes its appearance it is pulled out. The manure in the fall protects the crown of the plants from the cold and makes a mulch for the plants to come up through, and at the same time is an annual fertilizer. Fifty cents each year will cover all of the expense our asparagus bed is to us, and it is good for a cutting every other day for a month or longer. The variety is Conover's Colossal, hardy and excellent, but it should not be set closely if mammoth stems are to be expected; two feet apart is near enough for big specimens, and sixteen inches is better than a foot. The bed should not be cut the third year after setting. A bed can be raised from the seed which will be ready to cut the third year. The seed should be planted in hills sixteen inches apart, and the young plants kept clear from weeds, and the ground kept mellow.

We raised a bed once from the seed, but had to dig it up, owing to changing the grounds; and this reminds me that a spot for an asparagus bed should always be selected which will not be likely to be disturbed, and the bed with the care we give ours, will last through a great many generations. It is a nice legacy for one's children and grandchildren. I have known of beds in flourishing condition a hundred years old—surely a pleasant reminder of the thoughtfulness of ancestors.—*Ex.*

Transplanting Experience.

Plants should be placed in a hole filled with water, and the roots covered with the dry dirt. They will not wilt when set in this way. Dig the holes first, and carry the water along in a pail and pour it in, setting the plant as soon as possible. The water at the roots will keep the plant fresh and green, and the dry dirt around it at the surface will keep the moisture from evaporating. We set a lot of cabbage plants the other day in the hot sun in this way, and put horse manure around them. Not one died or wilted. Tomato plants grown in hot-beds are generally tall, slender things; they should be set in the same way and bent over so that the stalks may be covered up with soil, leaving only the heads out of the ground. This is the layering process, and when thus set they will do much better; new roots will start out from the stalks or stems, and the plant will not be knocked about so much by the winds or wilt so much.—*F. D. Curtis, Kirby Homestead, N. Y.*

Valuable to Peach-Growers.

At the twenty-fourth annual meeting of the Western New York Historical Society Mr. Youngblood advised cutting back peach trees in the early spring to induce a strong growth of new wood for the next year's fruiting. He also advocated thinning out the fruit. His plan is to thin out when the fruit is about the size of cherries, leaving the peaches five or six inches apart on the limbs. This rigorous thinning, he contended, not only largely increases the size of the fruit, but entirely transforms its character, making it rich, juicy and melting. An equally important result is the greater vigor of the trees. The pulp of the fruit, Mr. Youngblood explained, does not exhaust the vitality of the trees nearly so much as the production of a number of half-formed specimens of little value. Thinning peaches he considered a preventive of rot in such varieties as Hale's Early. The thinning should be done before the stone is formed, or the fruit will have drawn largely upon the vitality of the tree. Early varieties as a rule require the most thinning. A few kinds do not need thinning, the Late Crawford, for instance, which generally thins itself sufficiently.—*N. Y. World.*

Those who have young orchards should always carry with them a good pruning-knife when they travel through them. They will have constant occasion for its use. Here a shoot is starting out that is robbing the parent tree, and the longer it grows the greater injury it will produce. There, too many branches are forming to make the future head of the tree. Water sprouts are pushing out here and there that should be carefully removed. It is far better to remove these in their tender days than to wait until they have become tough and well established. A knife is wanted to direct the growth in the proper channels. We do not believe in severe pruning. It causes water sprouts to push out, and the tree will not be as vigorous and hardy with severe pruning as it will be without any. Most pruning in young orchards should be done with the knife. Have it always with you, and find time to use it when needed.—*Colman's Rural.*

The tenant farmers of England pay a larger sum per acre for the use of land than they would be obliged to give in purchase money for better lands in this country.

Farm Letters.

Centralia, Nemaha County.

April 21.—Still farming goes on and farmers are happy. Small grain looks splendidly, and there are no fears entertained but that we will have a good crop. Farmers are just in the midst of corn planting and fruit trees are in full bloom. The prairie is robed in a coat of green and the stock begins to thrive on the change of dry to green food. The prospect for a fruitful season is good, and unless it changes we shall have an abundant harvest.

I have just this spring, become a reader of the *FARMER* and since I have learned to look for its arrival, I don't see how I have done so long without it, but in it as in all papers, we see ideas advanced and principles advocated in which we cannot fully acquiesce.

Mr. P. Winer advises breaking shallow or sod will not rot, which is rather severely criticized by Mr. L. B. Tunnell in the issue of April 16th. Now, I fully agree with Mr. Winer. I have lived in Kansas 19 years and have had considerable experience in breaking prairie and handling it after it had been broken, and I find that the shallower it can be broken the better, and I would never do breaking before May. I well remember my first experience in prairie breaking. Soon after we came to Kansas we moved onto a new farm, and, of course, were very anxious to get it improved, consequently as soon as the frost was out in the spring we started the breaking plow, but were soon obliged to stop it to put in our spring crop. We did not start up again until the first of May and continued through June. I found that in the fall the May and June breaking was ready for the plow, while that which was done in March and April was not plowed until the next spring, and then was in very bad order, and for three years there were old sods tumbling about, while the late breaking was in good order at first plowing. This is only one instance, but my experience teaches me, that May and June are the best time to break, and break just as shallow as it can be done. I don't wish to criticize any person, but am just giving my ideas of breaking prairie sod.

I see that the *FARMER* is read by eastern farmers, some of whom talk of coming to Kansas. To those let me say, don't stop with talking, there is plenty of room here for you, just come along. But don't come as some have come, expecting to make a living without work, for if you do I am afraid you will fare slim. But come expecting to stay and work, either physically or mentally, and make money, and you will, ere long, agree with me, when I say that Kansas is a good place to work hard, eat hearty, sleep soundly, and make money. As I said I have lived in Kansas 19 years, or almost all my life so far—I am but a boy—and expect to stay here. I have seen grasshoppers and drought, but have never failed to have plenty to eat and wear. We probably shall see our state visited by scourges again, but what of that? What place is free from these? If some of the readers of the *FARMER* will tell, I probably will change my mind about staying here.

A. S. SAMS.

Mound Valley, Labette County.

April 23.—I am pleased to see the lively interest that is manifested the present season upon the hedge question in this state. It clearly indicates that the farmers are thinking about having some fences, and the Osage Orange hedge I think is the fence for Kansas. In my letter on setting hedge found in No. 15 of the *FARMER*, you cause me to say some things that I did not mean. Speaking of the roots being dry, the copy reads, "at all dry." That is, in case the roots are in that condition that if the plants are which are bunched up and heeled in at the nurseries such a season as this has been. Again you have me say 20 rods or further if the day is not too cloudy, should have read too drying. If the day is cloudy and damp you might drive 80 rods if you choose, but at all events, the plant should be covered while it is yet damp, and the soil turned up from the furrow fresh and moist. In covering the plants, I sometimes slip the attachment from the double tree to the single tree of the off horse, in case a right hand plow is used, and drive the team back, the off horse drawing the plow instead of in it. One hand can manage the board if necessary but two are better, both for that purpose as well as that of setting the plants as soon as possible after the furrow is opened.

The man that gives this plan a fair trial, will never go back to the spade or any other device of setting hedge by hand. It is objected, by some, that 8 inches is too close to set the plants where the hedge is to be plashed, but if they all grow and prove to be thrifty—which is very doubtful—you may cut out as many as you choose at the time of plashing, and the young stout ones growing up from the roots through the hedge will improve it very much, and the hedge can be made to turn stock a year or two sooner than when set much wider apart.

We began planting corn in this county about the 20th of March and the season has been so favorable that nearly all are done planting now and wish they had more ground to plant. There is at least one fourth more acres of corn planted in this county the present season than ever before.

Everything needs rain very much and there is every indication that we will have it in a few hours.

Corn is worth 22 to 25c; wheat 90 to 95c; cows 25 to 30 dollars; yearlings, \$6 to \$8; butter 10 to 15 cents per pound, eggs hardly saleable at any price. Hogs, fat, \$2.75 and \$3.00. J. B. C.

From Douglas County.

April 24th.—I have seen but little in the *FARMER* from this county for some time, especially the southern portion. The season, so far, could not have been more favorable for general farm work. I do not remember a season since my residence in the state some ten years, when the tillable land was planted or ready for the planter at so early a period in the season as this. A little more rain perhaps would have been desirable. The wheat was somewhat injured by the late freeze in March, and more rain at that time would have been of great benefit to the crop. At this writing it has regained very much and promising crops in, in better condition than ordinarily; doing better plowing and using more care, which is a very commendable procedure. There will be no idle ground around this year, and much more will be added to the tillable land by the new breaking to be seen through the county. Cattle have come through the winter and go on to grass in fine condition. The most of the stock cattle from this section are herded and driven off into Osage county where there is large range, and remain until fall. It costs about twenty-five cents per head a month. We think everything is looking up. Improve-

ments in the way of new barns and new dwellings with the repairing of old ones, is to be seen all over the county.

A great many families from the east have come in, the past season, and still are coming, and make improvements and they assist in building up and developing the country. Farms can be bought at \$15 to \$30 per acre, according to location, soil and improvement.

The fruit crop is somewhat mixed. The peach crop will be a failure. A large percentage of the old trees are badly injured by the extreme in the winter, and many killed outright. The apple crop will be only moderate. Early varieties none; fair prospect for raspberries, gooseberries and strawberry crop. Cherry crop will be fair. In a recent issue of the *FARMER* a gentleman from the southwest part of the state spoke of a rare kind of sugar or sorghum cane, called Golden cane, he having obtained seed in Indiana. Some ten years ago I obtained seed from the same place. I find the cane to be all reclaimed for it in productiveness and nearly so in quality. But that it may be of benefit to a great many who want to get the seed, I will here say that it is the white or early Amber cane, to all intents and purposes. There are several advantages realized in planting this cane. It does not stool like the old sorghum. The cane is of medium size, therefore easily handled. It will yield one gallon of syrup to six of the juice, when the cane is pure and properly cultivated; ordinarily it takes from 10 to 13 gallons of juice of the common sorghum to make one of syrup. But, to make the best article of syrup, I think the red-top sorghum makes the best. The amber is a little sharp. All cane to make good syrup should be planted on sandy or clay soil, never on black soil.

WM. PIASKET.

Ottawa, Franklin County.

April 22.—The weather here this spring has been generally cold, dry and windy, and grass is not yet big enough to turn stock onto. The spring has been a favorable one for doing general farm work, and I think farmers are generally well advanced with their work for the season, it has however, been very unfavorable for handling and planting trees it being dry and windy. There have been more trees planted this spring and last fall than usual and both the country and city have increased in population, and new buildings and evidences of general prosperity now than before, since the grasshopper year, while the prospect for another railroad to our city adds yet another stimulus to more rapid improvement and greater prosperity than heretofore. The last winter here has been very severe, and in consequence we shall get no peaches this year, and a very large portion of the trees are killed and all are very badly damaged, while I think there will be few cherries. What other damage may be done to fruit yet I cannot tell. Blackberries and raspberries are badly killed; and owing to the drought last fall and the one this spring, I shall get hardly any strawberries.

I wish to call attention to your article under the head of "horticulture" on page 118 in which you say editorially that Ben Davis and Missouri Pippin are the same apple.* Now I have some thousands of these two varieties in the nursery and the trees there are particularly unlike, and so far as I have observed in orchards each tree retains its peculiarities until it comes into bearing the fruit, I am less acquainted with but if it is not more like than the trees which bear it, surely there must be a mistake somewhere. Also our horticultural reports recognize them as different kinds, while so far as I know, nobody ever before pronounced these two varieties the same.

A. WILLIS.

* The mistake was corrected in the next issue of the *FARMER*, by inserting N. Y. Pippin in place of Missouri Pippin.—[Ed.]

From Osborne County.

April 12th.—The earth and all that dwells on this corner of it was made glad a few days ago when the rain in copious showers fell upon the thirsty land. We had had no rain of any consequence for six months, yet strange to say, our wheat had suffered but little if any. The late sown wheat failed to come up well last fall, but it generally came up nicely in the spring and has been growing well since. This soil beats the world for retaining moisture and for preserving vegetable life in long continued drought. The prospect at present is good for a bountiful harvest, and never before has this section of Kansas been so full of promise for the future. Our turn, at last, has come for a railroad. The Central Branch is coming. Its tidal wave has already reached us, and in less than six months from now the music of its melodious voice will be heard in the valley.

The citizens of Penn, Tilden and Sumner townships are asked for bonds and I think they will be forth coming on the 6th day of May, when the election is held.

One word more. It's about that "Daily." All right, we say up here, "go in." We will at least give it a week's trial. A good daily paper, at a low price, is much needed, and if yours fills the bill it will no doubt be a magnificent success. M. MOHLER.

From Jewell County.

April 22d.—We had very little rain through February and March. In the first week in April some few fields of fall wheat commenced to die out on account of drought, but in the second week in April we got some rain, and have had plenty ever since.

The most of the fall wheat looks well, and the prospects are good for a large yield. Spring wheat, oats and barley look well, but not much of the two latter sown in this locality.

Farmers are busy getting their corn ground ready for planting, and setting out forest and ornamental trees.

Peach trees are in bloom, but we don't expect over half a crop, with a few exceptions. Our apple orchards are not old enough to bear. All kinds of fruit seems to do well here when it is properly taken care of.

The large immigration west has increased the price of corn from 12 cents to 25 cents per bushel.

Our stock all wintered well. No disease among hogs or cattle.

No vacant government lands in this county. Farms sell from \$1,000 to \$1,500 for 160 acres.

No railroad in the county and no railroad bonds to pay. We have railroads all around us, from ten to forty miles.

The *FARMER* is a welcome visitor among some of us, but about nine-tenths of the farmers here seem to prefer foreign news to home news.

D. J. MATTER.

Agenda, Republic County.

April 18th.—Winter wheat, not good. Live stock of all kinds in good condition. Vineyards and orchards in good condition. Hedge in good condition. A good general merchandise store, a blacksmith shop and a mill wanted, we have good water privileges for a water mill which can be bought at a reasonable price by some one who will build a mill at once. H. RANNEY.

Rose Pests.

Dingee & Conard, in their pamphlet on Rose culture, give the following remedies for the little pests which destroy our roses:

"Red Spider is a very minute insect, first appearing on the under side of the leaves, and though difficult to see unless present in considerable numbers, its effects are quickly noticeable by the browned and deadened appearance of the leaves. It flourishes best in a hot dry atmosphere, either in doors or out; moisture is its greatest enemy. Sprinkle or wash your plants frequently, taking care to wet the underside of the leaves thoroughly, and you will not be troubled with red spider. In bad attacks it may be necessary to sponge the leaves daily with warm water until the pest is thoroughly destroyed."

"The Aphis or Green Fly attacks the young growth, and will first be found at the extremities of the branches. It feeds on the juices of the plant, and will soon starve and sicken the whole bush. Remedy: tobacco smoke. This is easily applied by covering the plant with a box or barrel, or even a quilt and putting under a pan of burning tobacco; the smoke should remain on an hour or more. If the insects are very bad it may take frequent applications, but it is a sure cure. A strong tea of tobacco will answer the same purpose, if more convenient to apply. The infected part may be dipped in, or the whole plant thoroughly sprinkled as often as may be necessary. For house plants when tobacco is not desirable, a hot water bath is almost equally effective. The water should be as warm as the hand can bear, and the whole top of the plant immersed two or three times in succession, only two seconds at a time."

Cement for Mending Broken Ware.

The Photograph News gives the following recipe for making this Cement:

"Put a small pinch of shredded gelatine (Nelson's) into a wide-mouthed bottle; pour over it a very little water and about one-fourth part of glacial acetic acid. Cork the bottle and in a short time the gelatine will swell up in waxen-like pieces, quite elastic, but at the same time firm enough to be handled comfortably. The acid insures the preparation keeping indefinitely. When required for use take a small fragment of the swelled gelatine and warm the end of it in the flame of a match or candle. It will immediately run into a fine clear glue which can be applied at once to the article to be mended."

Farming is a business similar, in its broad features, to all other trades and manufactures, and should be managed on the same principles. It is unpleasant, therefore, to observe that, while manufacturing and commercial interests have attained a distinguished position in this country, agriculture has not met with that consideration which its importance demands. Whatever the material prosperity of the country may be, it must be based on that which supplies the resources of natural life and vigor to the nation.

Patrons of Husbandry.

NATIONAL GRANGE.—Master: Samuel E. Adams, of Minnesota; Secretary: Wm. M. Ireland, Washington, D. C.; Treasurer: F. M. McDowell, Wayne, N. Y. EXECUTIVE COMMITTEE.—Henry James, of Indiana; D. W. Aiken, of South Carolina; S. H. Ellis, of Ohio. KANSAS STATE GRANGE.—Master: Wm. Sims, Topeka, Shawnee county; Secretary: P. B. Maxson, Emporia, Lyon county; Treasurer: W. P. Popenoe, Topeka; Lecturer: J. H. Martin, Mound Creek, Miami county. EXECUTIVE COMMITTEE.—W. H. Jones, Holton, Jackson county; Levi Dumbauld, Hartford, Lyon county; J. S. Payne, Cadmus, Linn county. COUNTY DEPUTIES.—T. Stevens, Lawrence, Douglas county; T. H. Tyers, Beatty, Marshall county; E. R. Powell, Augusta, Butler county; C. F. Morse, Milo, Lincoln county; A. J. Pope, Wichita, Sedgewick county; A. F. Beardon, Jefferson Co., Post Office, Dimond, Leavenworth county; S. W. Day, Ottawa, Franklin county; G. A. Hovey, Belleville, Republic county; J. E. Barrett, Greenleaf, Washington county; W. W. Cone, Topeka, Shawnee county; J. J. Thomas, Holton, Jackson county; Charles Disbrow, Clay Centre, Clay county; Frank B. Smith, Rush Centre, Rush county; G. M. Summerville, McPherson, McPherson county; J. S. Payne, Cadmus, Linn county; Charles Wyeck, Minneapolis, Ottawa county; F. M. Wierman, Milled, Morris county; John Andrews, Huron, Atchison county; George F. Jackson, Fredonia, Wilson county; D. C. Spurgeon, Leroy, Coffey county; James W. Williams, Peabody, Marion county; R. T. Ewalt, Great Bend, Barton county; C. S. Worley, Eureka, Greenwood county; James McCormick, Burr Oak, Jewell county; L. M. Earnest, Garnett, Anderson county; J. P. Clark, Kirwin, Phillips county; George Fell, Larned, Pawnee county; A. Huff, Salt City, Sumner county; James Faulkner, Iola, Allen county; W. J. Ellis, Miami county; George W. Black, Olathe, Johnson county; W. J. Campbell, Red Stone, Cloud county; John Rehlig, Fairfax, Osage county; L. S. Pleck, Bunker Hill, Russell county; J. K. Miller, Sterling, Rice county; W. D. Ripple, Severance, Doniphan county; Arthur Sharp, Girard, Crawford county; P. B. Maxson, Emporia, Lyon county; A. M. Switzer, Hutchinson, Reno county; S. N. Wood, Cottonwood Falls, Chase county; G. S. Kneeland, Keene, Wabash county.

TO OFFICERS OF SUBORDINATE GRANGES.

For the use of Subordinate Granges we have a set of receipt and order books which will prevent accounts getting mixed up or confused. They are: 1st, Receipts for Dues, 2nd, Secretary's Receipts, and 3rd, Orders on Treasurer. The set will be sent to any address, postage paid for \$1.00.

We solicit from Patrons, communications regarding the Order, Notices of New Elections, Feasts, Installations and a description of all subjects of general or special interest to Patrons.

In Memoriam.

At a regular meeting of Elm Grove Grange, No. 350, held at Cadmus, Linn county, Kansas, the following preamble and resolution was adopted:

That in the death of Bro. T. M. Armstrong, acting chaplain of this grange, who died March 27, 1879, that this grange has lost a true and honest patron, who in all the relations of life was endeared to a large circle of friends by his candor; who was indefatigable in his labors as a patron, and as a citizen, neighbor, husband and father, was universally respected and beloved; therefore be it

Resolved, That we, as patrons, condole with the family of our deceased brother in the irreparable loss they have sustained, and that a page be set apart on the records of this grange in memory of his services. R. F. KEMPTON, Sec.

"Just Demands, Just Rights and Equal Laws."

An essayist in a flourishing grange in Missouri urges the farmers and laboring classes to engraft into their minds the above motto in their warfare against the encroachments of all monopolies banded together to rule or ruin. These leeches are opposed to the grange and all other kindred organizations that have no other object in view than the inestimable and inherent right of self-protection. The bankers, the railroad men, the engineers and the coal mining interests all have their organizations for mutual benefit and protection. Then why such a hue and cry against the grange, an order that has done so much to protect our farmers against the "rule and ruin" policy of monopolists, who, in connection with conniving politicians, are opposed to every organization that will be of the least inculcable benefit to those who thrive by agricultural and mechanical pursuits.

Therefore, for the few brief reasons above mentioned, we would especially urge the patrons to perpetuate their organizations. Now that a general revival in our industries is so apparent to the casual observer of coming events, are these organizations most needed. With this revival in business will come, as a deluge, agents of designing monopolies, who will endeavor to inveigle farmers and mechanics in all sorts of clap-net bargains. Perpetuate your grange, patrons, and you will get "Just demands, just rights and equal laws."—Farmer's Friend.

Co-operation.

It is now ten years since some clerks in the London post office found themselves unable to live on their pay. They asked for more, and were refused. The answer came on a foggy, November afternoon, a day that was gloomy enough without bad tidings. Three of the men, talking over the dismal present and the dreary future, resolved to try what co-operation could do. They canvassed their fellows, and found a dozen who were willing to buy among them fifty pounds of tea. The money was paid in on the spot. The next morning, one of the original three, on his way to the office, bought at a wholesale store half a chest of tea. After office hours, the purchase was duly divided. The amount saved was twenty-five cents a pound. The story of this success spread abroad. Within three days the triumvirate had orders for another half chest. Soon they began to buy in somewhat larger quantities. They put the tea in an empty closet in the post office, and hired the porter to weigh it out to the different purchasers, paying him for his trouble with the pound or so which each chest contained over its nominal weight. Little by little they added a few other staple articles to their stock. The old cupboard, their first store, was now too small. They hired a little room in the topmost story of a neighboring village for a few dollars a month. This was considered to be a most daring step. But their business speedily outgrew these narrow quarters. They were crowded out of room after room. Five years ago they moved into a building of their own, for which they paid \$200,000. It is several stories high, with a frontage of perhaps a hundred feet on each of two streets; it is crowded with goods, clerks and customers. The civil service supply association, as it is called, sells \$5,000,000 worth of goods a year; moreover, it has arrangements with a great number of the best firms in London, by which its members can buy from these firms for cash at from twenty to forty per cent. discount. The business done in this way is estimated at \$5,000,000 more. Nine years ago, the association began by selling half a chest of tea. Its growth is a most joyous fact. It has been, however, a most alarming fact to the retailers of London. Two years ago they petitioned parliament to forbid the government employees engaging in such enterprises. The petition was in vain, but the petitioners took their revenge by driving Mr. Thomas Hughes from his place in the commons. When a number of the underpaid clerks of the Church of England undertook to imitate the civil service clerks, their proposed league was broken up, it is said, by the threat of an organized bolt of small tradesmen into the dissenting sects.—Alfred B. Mason, in May Atlantic.

Expensive Government.

Though separated as far as the east is from the west, those who study the problem of government all seem to arrive at one conclusion. A correspondent of the American Farmer, published at Baltimore, Md., sums up the situation in that state as follows: "What is the cause? The cause, in my humble opinion, is two-fold: 1st, to some extent the system of government under which we are living, and the unjust, unnecessary and class legislation of those who have been making laws professedly for us, (but more especially for their own benefit), and secondly, the way in which our laws are executed. Let us merely mention some of these: We have, under our present judicial system, three judges, with pretty good salaries, when we, who have lived long enough to remember when one judge presided in our circuit courts, are satisfied in our mind that the one judge did quite as well as the three, though for the three we are called to pay just about double: under the one judge system, we were called to pay about forty-two thousand dollars per annum; while under the three-judge system, we pay about ninety-two or three thousand dollars. Now, Mr. Editor, why this was done when the new constitution was framed, I, and a great many of my fellow farmers, never could tell; and I have very recently been informed that one of our ablest and purest jurists stated, that if there had not been so many lawyers in that convention, it never would have been done."

Well, it was, and is a very good thing for the lawyers, but a miserable one for the farmers and all tax-payers.

"Another cause is the very liberal, not to say wild way, in which the people's money is appropriated by the legislature, for purposes which the great body of our people are very little interested in. We mean appropriations for monopolies in the shape of large corporations—jobs of all kinds—public printing, etc. The relieving of the Baltimore & Ohio railroad of that thirteen hundred thousand dollars was, and is, to my mind, a great wrong, after the courts had decided that it was justly due the state. That act of the legislature did hurt me very much indeed, and I wondered how much of this kind of thing the people would stand."

"Another cause is we have too many officials in the management of our local interests."

"But what is the remedy and how is it to be applied? It is undoubtedly to be effected through the legislature in part, and in part by those having charge of our local or county interests. Where laws exist which are oppressive or unjust, they must be repealed. Where they are badly or expensively executed, a change is necessary in the officials; in other words, a thorough reform is necessary in the kind of men who are to make and execute our laws, whether state or local. That this cannot be accomplished through either of the present political organizations of the state, I think can be safely asserted. The alternative, then, is: that men of all parties, or of no party, who realize the present oppressed condition of the farmers, and the farmer's family, must forsake their party, (so far as their local interests are concerned,) band together, seek such men for office who will publicly pledge themselves to effect the desired reforms, and men whose past life will be a guarantee that they will faithfully fulfill the pledges made."

Again, we have three members of the Orphans' Court Bench (may I not say, in many cases, mere figure-heads,) when the business could all be attended to by the register of wills, and this court entirely abolished. In the District of Columbia all the business of the orphans' court is transacted by the register of wills, in connection with one of the judges of the circuit court, and there they have a population of one hundred and seventy-five thousand, where, in most of our counties, we have not one-tenth of that number. Now, why keep an unnecessary number of officers, when the people are so poor and unable to pay their salaries?

"Let me say, however, under this head, that the salaries and fees received by our officials are entirely too high, and out of all proportion to the incomes of the agriculturists of our state."

"My fellow farmers and brother grangers of the state will no doubt be surprised when I tell them that the salaries and fees received by the clerks of our county courts, our sheriffs, state's attorneys, clerks to county commissioners, and other officers, are more than double, and in some cases treble what they were even in war times."

This thing of working together—of laying plans and massing orders—seems to be one of the most difficult things for the grange to learn. It is not an uncommon thing for a grange to send off an order for goods one week, and the next week send off another order for the same goods for other members, whereas had they all ordered together they would all have secured lower prices and cheaper freight. There is no grange but can make a success of purchasing as a grange if the members will unite together; and there is no grange that can make much of a success at grange purchases if each member acts independently. If we wish to make the financial feature of the order a success, we must co-operate.—R. S. T., in Ohio Live Patron.

Hon. James Wilson says that farmers should associate together more, in order that they may have their inspiration kindled. Farm life develops steadiness of character; but isolation not only dries up human sympathies, but the intellect becomes mouldy, unless a spirit of inquiry is awakened at some time of life.

The seventh annual Inter State Exposition of Chicago will be held in that city, opening September 3d and closing October 18th, 1879.

Of farmers' tools, one Winter's abuse is worse than three Summers' constant use.

A Cecil county farmer, noted for his painstaking care of his stock and farming implements and machinery, gave us the above maxim, as applied to the too general negligence of farmers in the proper care of their farming implements. He cites three instances recently noticed. One of his neighbors, after seeding his wheat, last fall, tilted his double harrow against the fence by the roadside. The harrow stood there all winter, and when he wanted it this spring, he found the connecting rod had been stolen and the implement useless. The mowing machine of another farmer stands, on the middle of April, 1879, just where its owner left it last fall, after cutting clover seed. By the fence side it still stands. He plowed around it this spring. In the middle of the field of another farm, stands a melancholy horse-rake, where it has stood the winter through, since the last hay harvest (1878). It stands precisely where its owner left it, when he unhitched his horse last summer.—Cecil Whig.

WEANING PIGS.—The following plan was furnished for weaning pigs by a New Jersey farmer:

When the pigs are the proper age to be taken from the sow, shut them up in the pen in the morning; let them out a little while at noon, and again at evening. The second day let them out only at morning and evening, keeping them up at night. This will insure the sow's drying up at once, and without any evil effect.

Advertisements.

Our readers, in replying to advertisements in the Farmer, will do us a favor if they will state in their letters to advertisers that they saw the advertisement in the Kansas Farmer.

Auctioneer.

I take this method of informing the Public at large that I am located at Topeka, and ready at all times to attend

PUBLIC SALES.

In any part of the State, in the capacity of Auctioneer. I make

Stock Sales a Speciality

and am prepared to give all Sales entrusted to me, the widest and most conspicuous advertising, both through Papers of extensive circulation and by Circulars and Posters. I have had large experience and knowing my business I unhesitatingly guarantee all who employ me full satisfaction. My terms are reasonable. Call on me at the FARMER office or address me at Topeka.

H. G. EVANS.

DARK BRAHMA FOWLS FOR SALE.

Pure blood; imported. J. E. DUNCAN, corner Seventh and Fillmore Streets, Topeka, Kansas.

Shannon Hill Stock Farm

Thoroughbred Short-Horn Cattle and Berkshire Pigs, bred and for sale. Only first-class animals allowed to leave the farm. Address G. W. GLICK, Atchison, Kansas.

Poultry and Eggs.

For Sale, a few Tricos each of Dark and Light Brahms, Buff Cochins, Brown and White Leghorns, also Aylesbury & Pekin Ducks, in pairs. Eggs from the above varieties and Plymouth Rocks, until July. Everything warranted Pure Bred and of the best strains. Prices to suit the times. Address J. DONOVAN, Fairmont, Kansas.

YOUNG SHORT-HORNED BULLS.

No. 1, extra lot of fine young short-horn bulls for sale. Weight of yearlings, 970 to 1000 pounds. Address G. W. GLICK, ATCHISON, KANSAS.

SHORT HORN BULLS.

Three For Sale Very Cheap.

Prills Lord Abraham, Ruby's Prince and General Tomlinson; one, two and three years old, all recorded in Am. Herd Book; of the best and most fashionable families, two rich reds, one rich roan. No. 1 animals. If sold before May 5th, will take \$50 a piece. A. H. LACKEY, Peabody, Marion Co., Kansas.

WOOL-GROWERS

Can rely upon immunity from contagious disease in their flocks after use of LADD'S TIGER SHEEP WASH. GUARANTEED to give immediate cure for scab and prevention of infection by that terror to flock-masters. GUARANTEED to more than repay the cost of application by increased growth of wool. GUARANTEED to improve the texture of the fleece instead of injury to it as is the result of the use of other compounds. GUARANTEED to destroy vermin on the animal and prevent a return. GUARANTEED to be the most effective, cheap and safe remedy ever offered to American Wool-growers. No flock-master should be without it. I have the most undoubted testimonials corroborative of above. Send for circular and address orders to W. M. LADD, 21 N. Main St., St. Louis, Mo.

Joint Public Sale

—OF—

Short-Horn Cattle

The Undersigned will sell at auction, at ST. JOSEPH, MISSOURI, MAY 20, 1879.

About eighty head of cows, heifers and bulls, which will compare favorably with any herd sold in the West during the season, consisting of Young Marys, Flora Hastings, Rubys, Dacies, Young Phillips, Rose-Buds, &c. And a few High Grades. Also Fifty Head of Cotswold Sheep and a lot of Jersey Cows and Bulls. The undersigned have had twenty years experience in breeding Short-Horns, and their herds have borne off as many premiums as any herds in the west. Breeders will find it to their interest to attend this sale. Catalogues with full particulars will be sent on application. Address

Bridgford & Barker, PARIS, MISSOURI

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\$50 SCALES,

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SOLD ON TRIAL.

Don't say humbug. Judge for yourself. Send for free book. All Iron and Steel. Address

JONES OF BINGHAMTON, BINGHAMTON, N. Y.

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To all farmers and hay growers. Save your money, time, labor and hay by using Hill's Hay Raker. With two rakes, can rake and rick 30 acres of hay in one day, dispensing with all sulky or revolving hay rakes, and takes the hay direct from the swath of the mower on to the rick without handling with a pitch fork. Farm and country rights for sale. For prices and particulars, address

NEAT & CRAB, Rich Hill, Bates Co., Mo. Sole proprietors for State of Kansas.

BROOM CORN SEED.

Ohio Evergreen, and other choice varieties; send for circular.

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Breeders' Directory.

L. A. KNAPP, Dover, Shawnee Co., Kas., breeder of Pure Short-Horn Cattle, and Berkshire Pigs.

C. S. EICHHOLTZ, Breeder of Short-Horns, Berkshires and Bronze Turkeys, Wichita, Kansas.

F. B. Dyer, Shawnee Co., Kansas, breeder of the best strains of Imported English Berkshire Hogs. A few choice Pigs for sale. Prices Low. Correspondence solicited.

SAMUEL JEWETT, Merino stock farm, Independence, Mo., breeder of Spanish Merino sheep, rams constantly on hand at reasonable prices. Call and see them or write for particulars.

EGGS FOR HATCHING, from pure bred light Brahms fowls. Price \$1.50 per sitting. Sent securely packed, C. O. D. to any part of the state. CLARENCE McDONALD, P. O. Box 366, Topeka, Kansas.

R. W. H. CUNDIFF, Pleasant Hill, Cass Co., Mo., breeder of thoroughbred Short-Horn Cattle of fashionable strains. The bull at the head of the herd weighs 3000 pounds. Choice bulls and heifers for sale. Correspondence solicited.

HALL BROS., Ann Arbor, Mich., make a specialty of breeding the choicest strains of Poland-China, Suffolk, Essex and Berkshire Pigs. Present prices less than last year's rates. Satisfaction guaranteed. A few splendid pigs, jills and bours now ready.

Nurserymen's Directory.

L. E. SUMMITT and BELTON NURSERYMEN, Fruit Trees of the best, and cheapest. Apple Trees and Hedge Plants a specialty. Address ROBT. WATSON, Lee's Summit, Jackson Co., Mo.

Physician.

MRS. DEBORAH K. LONGSHORE, M. D., late of Philadelphia, Pa. Office and residence on Topeka Avenue, first door south of Tenth St., West Side.

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Having added to my deep well drilling machine, an auger and light drilling machine, I am now prepared to bore and drill wells, such as you need, and furnish pump and wind mill, putting them in position, ready for use if required. NO WATER NO PAY. Have had 14 years' experience. Have put down over 300 wells, from 20 to 200 feet deep, securing water in every case; contracts taken at the most reasonable rates; if you want water, give me a contract and you shall have it as it is only a question of depth to secure it. Address C. B. SWAN, Box 592 Topeka, Kansas, or call on Spear & Willis, Carbonated Stone and Pipe Works, Kansas Avenue, Topeka.

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ALBERT CRANE, BREEDER OF

Short-Horn Cattle

—AND—

Berkshire Pigs,

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Catalogues free. The largest and best herds in the west. Over 200 head of cattle, and a like number of pigs. PRICES LOW. Address letters to DURHAM PARK, Marion County, Kansas.

GEO. M. CHASE,

KANSAS CITY, MISSOURI,

BREEDER OF

Thoroughbred English

Berkshire Pigs.

—ALSO—

Dark Brahms and White Leghorn

Chickens.

None but first-class stock shipped.



WM. DAVIS, Breeder of

Pure Bred Poultry,

LEAVENWORTH, KANSAS. Light Brahms, Dark Brahms, Buff Cochins, Partridge Cochins, White Cochins, La. Flocks, White Dorkings, Black Hamburg, Plymouth Rock, American Dominique, Brown Leghorns, Houdans, Crevecoeur, Pekin Ducks, Fantail Pigeons. Eggs from Buff Cochins and White Dorkings \$3.00 per dozen, Pekin Ducks \$2.50, all others \$2.00 per dozen. Send for Catalogue.

Southern Kansas Swine Farm.



Our Herd consists of over three hundred (300) head descendants of the very best of

Poland-China,

—AND—

Berkshire Hogs,

that could be purchased in Ohio, Iowa, and Illinois. At the head of the Poland-China side of the herd is Fiddler, 395, (A. P. C. R.) bred by S. A. KNAPP of Vinton, Iowa. On the Berkshire side is Peerless, 2183, (A. B. R.) sired by imported Shrovelton, 781—dam Maggie Hever 1, 1794. All our Berkshire pigs are sired by Peerless. He is a perfect hog in every respect, is now eighteen months old, in good order for service, and weighs 450 lbs. Our Berkshires are large and mature very early. We have been to great expense to obtain the original stock of both breeds, and invite inspection of our herd. We have for sale now anything a purchaser may desire in the line of Poland-China or Berkshire hogs. Spring pigs now ready for delivery. Farm one-half mile south of Emporia. Correspondence solicited. RANDOLPH & PAYNE, Emporia, Kansas.

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HUDSON & EWING, Editors & Proprietors,
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TO SUBSCRIBERS.
A notification will be sent you one week in advance of the time your subscription expires, stating the fact, and requesting you to continue the same by forwarding your renewal subscription. No subscription is continued longer than it is paid for. This rule is general and applied to all our subscribers. The cash in advance principle is the only business basis upon which a paper can sustain itself. Our readers will please to understand when their paper is discontinued that it is in obedience to a general business rule, which is strictly adhered to and in no wise personal. A journal to be outspoken and useful to its readers, must be peculiarly independent, and the above rules are such as experience among the best publishers have been found essential to permanent success.

Only One Dollar.

As a special inducement for many new subscribers to try the Kansas FARMER, we are sending the "Old Reliable" for the balance of the year for ONE DOLLAR. We feel persuaded that those who are induced to make a trial of the FARMER by our liberal offer, will continue to be subscribers and readers for the balance of their natural lives. We ask our readers to make known to their new neighbors the terms of our offer—to send the paper the balance of the year for only ONE DOLLAR. Help yourselves by aiding to extend the circulation of the farmers' paper among farmers.

A Law to Protect Railroads.

While the war—albeit a wordy one—has been from the point of view of restraining railroads from imposing upon the public by stretching the liberal discretionary powers granted them by their charters, it does not seem to have occurred to the disputants that the railroads suffer very much for want of proper protection from each other. This lack of legal safeguards from reckless, and often malicious competition, among railroad lines running between the same points, has wondrously sunk hundreds of millions of capital. "Cutting," as it is termed, is not only a positive loss to roads in more than the mere lessening in the amount charged for a given quantity of freight carried, but it has a demoralizing effect on the roads within the far-reaching and wide-spreading influence of the "cut." Freighters hasten to take advantage of what they interpret to be a temporary fall in freight, and forward more goods, both as buyers and sellers, than the demands of legitimate business justify. Dealers caught with large quantities of goods on hand, on which they have paid the former advanced rates of freight, are compelled to lose the difference to meet the fall in market which cut rates permit, or compel. When the evening-up rise in freights takes place, which it is sure to do, then the public is placed under contribution to the men having stocked full up under low freights.

But the roads are more directly and injuriously affected. An unusual and urgent demand is made upon their resources to furnish means for the suddenly increased business. Their cars, engines, tracks, employees, officers, are all taxed beyond their capacity to transact the sudden increase of business with necessary dispatch. Capital for an increase in stock and labor has to be invested, for this fever-created emergency, which lasts but a few weeks—or at best months—when from sheer necessity the contestants are compelled to come to some agreement; again freights and passenger fares return to their former rates, and there is a lull in business. Business which should have continued through half the year, perhaps, has been pushed through in a few weeks. The demands of trade have been anticipated for a considerable period in advance, and the railroads find their rolling stock lying idle, their tracks and engines injured from overwork. Employees have to be discharged and a general reorganization becomes necessary. Scarcely anybody has been benefitted; many have been worsted, directly or indirectly, in their business, more than they can possibly estimate.

Along the contending lines out of the influence of competition, the public very often have to pay a portion of the loss incurred by the war carried on by these rival chieftains in transportation, and suffer from oppressively high fares and freights, both direct and by competitors in their business at the competing points, who can ship longer distances at a less cost. These contests between rival railroad lines resemble the battles which are waged by rival, savage tribes. They result in a great deal of loss and suffering to themselves, their friends and allies, with no compensating public advantage.

The "cut" which commenced a few weeks ago among the eastern trunk lines, resulted in a short time in throwing idle 2,500 freight cars in the west, while the east was short 5,000. Meantime a glut of grain was accumulating in Chicago, with remunerative prices at other points not accessible owing to the demoralizing railroad strife. Under this condition of chronic warfare among railroads, the public lose, the stockholders lose, and the officers and directors who manage the roads are also losers. Rail-

road officials are invariably censured for the condition of affairs here described, but under existing circumstances they are powerless to prevent their constant recurrence.

Frequent efforts are directed to that end by "pools" and other agreements, but these expedients prove but ropes of sand. The war must go on while the present system of railroad management attains, with the feverish uneasiness in the transportation business, and chronic unhealthy state, until some railroad chieftain, with the genius of a Bonaparte, or a power like the Rothschilds or Barings, conquers and absorbs all the principal railroad lines in the country. The Union Telegraph company is a specimen case in another and less costly business. Commodore Vanderbilt was the initial man as the great railroad captain of the age. For the causes just cited and occurring constantly, and for the dangers looming up so clearly discernible in the near future, railroad companies require the protecting and restraining power of just laws, prescribing their powers and duties, and carefully defining their field of action.

A railroad differs from every other property in the fact that the public are joint owners with the stockholders and mortgagees. Few have taken the pains to consider and determine what is necessary to constitute a complete railroad. The grade, track, rolling-stock and buildings are embraced in the charter and belong to the stockholders. These no more constitute a complete railroad than a dead body represents a perfect man. The passengers and freight of a railroad are as necessary to its existence as life to the man. Without these vitalizing elements both are speedily consigned to silence and dust. It is therefore plain that without this precious, living freight and valuable merchandise, a railroad would represent but a lifeless body wholly valueless and in a state of rapid dissolution. These two latter constituents of a railroad are a part of the public and the public's property. No corporation can own them and no railroad is worth a farthing without them. In this unproperty-like feature, a railroad approaches the nature of a navigable river or the high seas.

It is a mistaken theory that railroad companies are absolute owners of the property necessary to constitute railroads, and have as clear a right to do as they please with it as a merchant, mine-owner, etc., has with his property. The latter acquired by absolute purchase; the former, as we have shown, never can. Therefore we contend that railroads need the protecting arms of the government over them to shield them from their natural enemies—other rival roads. The interest of those having capital invested in them demand this. The people who suffer exactions from causes, some of which we have mentioned; the trade of the country which should be jealously guarded from every influence that may cause violent fluctuations and unhealthy conditions; all of these and many more potent causes might be named, which demand that the duties and privileges of railroads shall be met, carefully defined, and they be most scrupulously guarded from those rights by the protection of law, for it is manifesting itself daily, as the railroad interest of the country develops, that they are as merciless enemies of each other as wild beasts.

Visit to a Kansas Apiary.

We snatched a day last week to run down to Lawrence, where we were met by Mr. N. Cameron, who has turned his attention to bee-keeping for several years, and has been very successful as a bee-keeper of the more intelligent class. An hour's drive through a fine agricultural country, brought us to the place of Mr. C. We observed the wheat fields were looking very well, and the harvest prospects for this grain are altogether flattering in this part of Douglas county.

Mr. Cameron's apiary has suffered severely in loss of bees during the winter and spring, from dysentery. Many of the colonies had perished from this cause, the combs often being left full of honey after the bees had died, the marks of the disease left on the combs showing plainly enough the cause of the mortality. Mr. Cameron attributes the great loss of bees the past winter and spring to the impurity of the stores which the bees gathered late in the fall, being composed largely of the juices of fruit and honey-dew. This impure food soured and diseased the bees, hence the great mortality in apiaries last winter. Mr. Langstroth, who is an authority on bees, attributes the losses to the same cause.

Mr. Cameron seemed to consider the loss of bees a comparatively small misfortune provided the honey and combs were saved. Having these to use in building up new colonies, the apiary can be restocked very rapidly, by dividing strong hives when the honey season fairly opens and the weather is warm enough to promote brood-rearing, and supplying the newly-made colonies with frames containing comb and honey, and young queens.

Mr. Cameron's experience in bee-keeping has convinced him that the patent hive devices, double hives, cushions, etc., are useless expense. His hives are of two sizes, one a foot square, holding nine frames, the other holding twelve frames 9½x12 inches. The hives are made after the Langstroth pattern in the simplest manner possible. The bottom is nailed in with an entrance for the bees in front six or seven inches long by three-eighths inch in depth. The frames are placed in the hive from the top and rest on rabbits back and front, over which a cap with shallow flanges fits tightly, leaving no entrance or exit to the hive for bees or moths, except the one in front. Top ventilation Mr. C. has discarded as a humbug. Place the hives in the shade and the bees will attend to the proper ventilation. This, in short, is Mr. Cameron's

experience, and his economical, simple manner of keeping bees, adopted after trying the various recommendations and reading up in bee literature.

Quarterly Report of the State Board of Agriculture.

The quarterly report ending March 31, of the above board, has been somewhat detained by the press of work at the state printing office, where the laws passed by the last legislature are being published. The publication of these agricultural reports has been changed by act of the last legislature from monthly to quarterly.

There is much valuable information contained in this report, as there is in all of the reports prepared by Mr. Gray. We give statements from the report on the state of crops, condition of farm stock, etc.

According to the estimate of correspondents in November last, there was a decrease in the acreage of winter wheat from the year before of 24,220 acres. The estimated increase in the breadth of spring wheat over that of 1878, is 36,456, or an actual increase of 12,236 of the combined acreage of winter and spring wheat over that of last year. But since these estimates were made quite an additional breadth has been sown.

In Anderson county cholera appeared among poultry in January and February, which was successfully treated by administering a mixture of corn meal water and turpentine.

Scab appeared among sheep in Butler county; which had been brought from Missouri, but was successfully treated by a solution of tobacco.

A disease supposed to be glanders, broke out among the horses in Clay county. A successful prevention of the infection has been to wind a strip of cloth soaked with pine tar, around the horse's bit, and daub up the feed boxes and mangers with tar.

Some cases of hog cholera in January, were successfully treated in Cowley county by a mixture of charcoal, pepper and sulphur.

Colt distemper has been successfully treated in Greenwood county, by pasturing the patients a short time each day on winter rye or wheat, and in severe cases by causing an inhalation of the fumes of sulphur or burning leather.

CORN-SMUT.

A cattle-raiser in Jackson county having lost several head by death caused by what he presumed to be from eating smut on corn stalks, he took them from the cornfield and fed them exclusively on hay, when no more deaths occurred. He again turned his cattle into the cornstalks, when they commenced dying again.

In Jewell county some supposed deaths from eating smut have occurred. An observant correspondent reports that none but small cattle have died, from which he infers that they have been driven from the watering places and kept from drink by the larger. The same correspondent believes that an abundance of water is an effective remedy in cases of sickness alleged to be caused by eating corn smut.

In Osborne county, a correspondent says that one farmer lost five head of cattle from one day's running in a stalk field. The correspondent continues: "He opened them, and found the second stomach packed tightly with smut. He is very positive that smut was the cause of the death. I presume that in this case smut was the cause, but I think it was from impaction, and not, as some suppose, from any hurtful quality of smut itself. I am satisfied that if cattle have plenty of loosening feed, with salt and water convenient, they can run in stalk fields, even if smut is plenty, without any injurious effects." Where stock men have given their cattle free access to salt and sulphur, they have experienced no losses from the feeding of corn stalks.

In Republic county a correspondent reports: "Some few cattle have died. Examination shows dry corn husks to be the cause, with lack of water. One man here says it is all bosh as to corn smut killing cattle, and offers to furnish stock to experiment on, if they can have water plenty. I think him sound."

A correspondent from Harvey county writes: "I believe the general tenor of Prof. Kedzie's article ('Corn Smut as a Cattle Poison,' in First Biennial Report of Kansas State Board of Agriculture) will have the tendency to do harm, as the ripe fungus, *Ustilago maidis*, will certainly produce abortion in animals. It has been extensively experimented with by physiologists, and is now used as medicine, where it has largely supplanted the ergot of rye. I myself have used it largely in the form of fluid extract, and find it certain and efficient in all cases where ergot has been used heretofore, and more prompt in its action. It is manufactured and sold by all leading medical chemists, and it would hardly have found so extensive demand if it possessed no actual physiological or toxicological properties."

FRUIT PROSPECTS.

Reports from nearly all parts of the state are favorable to a large crop of apples, but peaches in most places are considered a total or nearly total failure. In Ellis county the peach trees have wintered safely and prospects for a crop excellent. In Harvey county hopes of one-fourth of a crop are entertained. Prospect for half a crop of budded fruit in Atchison county. In Barton the prospects are fair for a crop. In Brown prospects for a medium crop. In Chattanooga, on high land the prospects are from one-half to a fine crop. On low land, buds all killed. The bloom gradually decreases from the summit to the low lands. In Cherokee the yield will be moderate. In Clay, plenty of peaches anticipated. In Cloud, prospect of a fair crop on high land; killed on low land. Prospects good in Cowley. In Doniphan, one-third of a crop hoped for. In Douglas, the great fruit county, trees damaged and buds all

killed. In Ellsworth, a passable crop assured. A fair crop expected in Labette. In Lincoln, a good crop expected. In Marshall, a half crop anticipated. In Miami, seventy-five per cent. killed. Several other counties give similar reports, but in two-thirds of the counties a total failure of the peach crop is anticipated.

The prospects for small fruits are reported flattering from nearly every county in the state. This quarterly report is full of interesting facts relating to the progress of agriculture in Kansas, from which we may glean future chapters for publication in the FARMER.

The Mutton Trade.

This cattle plague threatens to prove something of a bar to the free export of beef cattle from this country to England, but there is no hindrance to the export of fat mutton, except the lack of mutton to export. As profitable a trade as the export of beef cattle from this country to Europe promises to become, if the restrictions placed upon it by pretended or real false of infectious diseases being carried from the new to the old world, the trade in mutton could be rendered still more profitable, while there is no such threatened draw back in the case of sheep. Fat sheep of the large mutton breeds meet a ready sale in England if of first rate quality, and it seems to us that no better branch of stock raising could be followed than that of producing large, mutton sheep both for home and foreign markets.

A Cotswold cross on what is familiarly termed a good class of common ewes, is very prolific. If the flock is well handled and all but the best ewes weeded out, the increase in lambs will reach one hundred and twenty-five per cent. A very large per cent of the ewes will produce twins and if well fed will raise both and make large, thrifty lambs. The lambs must be provided with feeding troughs where the old sheep can be cut off from them, which is easily managed. The wool of the sheep, it is safe to estimate as an offset to the expense of attention and feed with a margin on the profit side of the account, leaving a clear gain of the mutton.

Kansas would make one of the very best feeding grounds for heavy carcassed sheep. The abundant pasturage, dry, rolling land and pure water, with a healthy, breezy climate, the primary conditions for a profitable mutton sheep business.

The increase is much greater in sheep than cattle, and if the ewes were kept, as they should be, two or two and a half years, to make the best quality of heavy mutton, two large fleeces of long wool would pay a good profit on the keep and care, for that time, and an animal weighing 200 to 250 pounds at that age, well fattened, would be sure to command ready sale at the top of the market quotations. Sheep require no more or better care than cattle, if the requisite care to insure the largest profit is given, but the mode of treatment is somewhat different with the two classes of stock.

There is a steady market for all the good mutton that can be raised, and the lambs that it was not desirable to keep would, if kept in fine condition, command a handsome price when four and five months old.

The Wheat Crop of 1879.

Already speculation is ripe as to the coming wheat crop and with the customary pleasing aspect of the horn of plenty. Speculators will please take notice that the farmers of the west say in advance that they expect a large wheat crop the present season, and arrange prices accordingly.

Drouth has prevailed and been protracted to an unusual length of time in the spring wheat region which is in the north west. Apprehension was felt for the safety of the winter wheat during the dry, cold, windy weather which prevailed in March for several weeks, but warm copious showers, showed that the roots of the greater part of the crop were uninjured, and the favorable turn in the weather gave new life and promise to winter wheat fields.

From Illinois and Indiana we receive favorable reports of the crop. The prospects in Iowa are reported favorable and encouraging also. In Michigan wheat has withstood the drouth, and an increased acreage and fine appearance of the young plants, bespeak an exceedingly fine crop.

In Nebraska the rainfall is sufficient for agricultural purposes, and the farmers have got in their spring wheat in a most satisfactory manner, the outlook being more favorable than at this time last year. The farmers of the wheat districts in Ohio are in good heart and say their wheat prospects could not be better; the wheat is strong and healthy and growing vigorously. In Minnesota the great spring wheat state, the increased breadth sown over last year is reported to be 300,000 acres. In the southern part of the state the grain has been got in the ground in good condition, but in the southern part rainy weather threatens to interfere disastrously with getting the seed into the ground, and with its germination and growth afterwards. In Wisconsin the same complaint of dry weather prevails, and the crops of all that northwestern region depend largely upon the rainfall in a short period. If rain is withheld the spring wheat crop will be short, and "new process" flour correspondingly high.

The Timber Culture Law.

We have received frequent inquiries for information on the timber act, passed by the last session of congress and have procured a digest of the same prepared by Messrs. M'Bride, Bro. & Cook, who make a specialty of this business.

Be it enacted by the Senate and House of Representatives of the United States of America, in Congress Assembled: That the act en-

titled "An Act to amend the Act entitled 'An Act to encourage the growth of timber on Western prairies,' approved March thirteenth, eighteen hundred and seventy-four, be and is hereby amended so as to read as follows: That any person who is at the head of a family, or who has arrived at the age of twenty-one years, and is a citizen of the United States, or who shall have filed his declaration of intention to become such, as required by the naturalization papers of the United States, who plant, protect and keep in a healthy, growing condition, for eight years, ten acres of timber on any quarter-section of any of the public lands of the United States, or five years on any legal subdivision of eighty acres, or two and one-half acres on any legal subdivision of forty acres or less, shall be entitled to a patent for the whole of said quarter-section, or of such legal subdivision of eighty acres or forty acres, as the case may be, at the expiration of the said eight years, on making proof of such fact by not less than two creditable witnesses, and a full compliance of the further conditions, and Provided further, That not more than one quarter of any section shall be thus granted, and that no person shall make more than one entry under this act.

The person applying for the benefits of this act shall, upon application to the Register of the Land District in which he or she is about to make such entry, make affidavit before the Register or Receiver, or the Clerk of some court of record, or officer authorized to administer oaths in the district where the land is situated, and upon filing said affidavit with said Register and Receiver and upon payment of fourteen dollars, if the tract applied for is more than eighty acres; and seven dollars, if it is eighty acres or less, he or she shall thereupon be permitted to enter the quantity of land specified. The party making an entry of a quarter-section under the provisions of this act, shall be required to break or plow five acres covered thereby the first year, five acres the second year, and to cultivate to crop or otherwise, the five acres broken or plowed the first year; the third year he or she shall cultivate to crop or otherwise, the five acres plowed the second year, and to plant in timber, seed or cuttings, the five acres first broken or plowed, and to cultivate and put in to crop or otherwise, the remaining five acres, and the fourth year to plant in timber, seeds or cuttings, the remaining five acres. All entries of less quantity than one quarter-section shall be plowed, planted, cultivated and planted to trees, tree-seeds or cuttings in the same manner and in the same proportion as hereinbefore provided for a quarter-section. Provided, however, that in case such trees, seeds or cuttings shall be destroyed by grasshoppers, or by extreme or unusual drouth, for any year or term of years, the time for planting such trees, seeds or cuttings shall be extended one year for every such year they are so destroyed. Provided further that the person making such entry shall, before he or she shall be entitled to such extension of time, file with the Register and Receiver of the proper Land Office, an affidavit corroborated by two witnesses, setting forth the destruction of such trees, and that in consequence of such destruction, he or she is compelled to ask an extension of time. No final certificate shall be given or patent issued for the land so entered until the expiration of eight years from the date of entry, and if at the expiration of such time, within five years thereafter, the person making such entry, or if she or he be dead, his or her heirs or legal representatives shall prove by two creditable witnesses that he or she planted and for not less than eight years have cultivated and protected the character of trees as aforesaid, that no less than twenty-seven hundred trees were planted on each acre and at the time of making such proof, that there shall be at least six hundred and seventy-five living and thrifty trees to each acre, they shall receive a patent for such tract of land.

Persons having timber entries under the old law, will be allowed to make final proof by showing a compliance with the new act, which requires six hundred and seventy-five growing and thrifty trees on each acre required to be planted in forest trees; the rows must be close enough to plant twenty-seven hundred seed nuts or cuttings on each acre.

A letter by Mr. G. H. Nelson of Lincoln, Lincoln Co., Kas., dated April 28th says that that section had been blessed with plenty of rain, weather fine and farmers generally planting corn. His suggestion about getting things "mixed" was a shrewd guess. There are three or four sides of the subject that he has not taken a look at yet.

Alfalfa plants measuring just two feet in height, were cut from the college farm this morning. From the same piece, four heavy crops of hay were taken last year.—*Manhattan Industrialist*.

Teach the boys to love the farm, but do not prove hard taskmasters. Do not make their farm life one of drudgery and toil if you would have their thoughts in after life turn lovingly to their old homes and happy young lives. Teach them that something more than muscle and physical endurance is required, that indeed agriculture is a science or art that should be conducted according to clearly defined laws and well established principles, and successful in proportion to the intelligence that directs it.

BROILED SWEET BREAD.—Parboil and rub well with butter; then split open the sweet breads and broil them on a gridiron; putting them every three or four minutes into melted butter, so as to baste them well; season with salt and pepper; when well browned serve very hot.

CHICAGO, IL